DOCUMENT RESUME

ED 385 523 SP 036 144

AUTHOR Hale, Michael E.; Kieffer, Ronald D.
TITLE Helping Teachers Use Multimedia Portfolios for Professional Development.
PUB DATE Apr 95
NOTE 7p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 18-22, 1995).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Computer Literacy; *Computer Uses in Education; Elementary Education; Elementary School Teachers; Faculty Development; *Informal Assessment; *Multimedia Materials; Portfolio Assessment; *Portfolios (Background Materials); Professional Development; *Self Evaluation (Individuals); Student Teachers
IDENTIFIERS Apple Macintosh; *Multimedia Technology; *Teacher Portfolios

ABSTRACT

This paper is a preliminary report on a grant-funded project to use multimedia technology to create teacher portfolios. The workshop was the first step for testing the feasibility of multimedia for portfolio development for preservice and inservice professional development. The goals for the participants in the workshop were to begin learning multimedia tools in the Macintosh and Microsoft Works environments and to increase their awareness of the issues related to portfolios. As preparation for the workshop, potential participants from one urban and two rural elementary schools were given instruction in Macintosh basics and Microsoft Works. Nine teachers and five student teachers were selected to participate. The workshop was conducted in two 5-day sessions, 3 weeks apart. Data were collected by participant computer journal, specific writing assignments, evaluations, interviews, and observation. Overall, the participants were excited and motivated to work and to learn about multimedia technology. Results in five areas of the project are discussed: (1) access to computers; (2) access to experts; (3) explanation/work choices; (4) concerns/complications; and (5) professional growth. (Contains 8 references.) (ND)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Helping Teachers Use Multimedia Portfolios for Professional Development

Michael E. Hale
Mathematics Education
105 Aderhold
College of Education
University of Georgia
Athens, Georgia 30602

Ronald D. Kieffer
Language Education
125 Aderhold
College of Education
University of Georgia
Athens, Georgia 30602

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 385 523

Objectives: At this roundtable discussion session, we examine the status of a grant[1] to use multimedia technology to create teacher portfolios. We will describe our workshop model and the teachers' beliefs and attitudes about their knowledge and skills as they worked with multimedia during the summer and school year. The examination of these participants' beliefs about the value of the workshop can help inform teacher education programs and state departments of education about enhancing technology use by teachers for the purpose of professional development. This paper is not a completed analysis of this effort but a preliminary set of findings.

Perspectives: Power On, a report by the Office of Technology Assessment (1988), provides suggestions for effective technology in-service: activities linked to instruction, peer interactions, an appropriate balance between lecture and guided practice, and follow-up opportunities. The report goes on to say that many teachers are anxious about using computers. Besides trying to help teacher become comfortable with several multimedia tools (HyperCard, Adobe Photoshop, Adobe Premiere, and VideoFusion Recorder), this workshop begins the process of portfolio development with the participants.

For teachers, the use of portfolios for professional development is a form of self confrontation. With current multimedia technology, teachers can collect and confront video, pictures, audio, and text about themselves. Fuller and Manning (1973) did a review of findings associated with self-confrontation as used in teacher preparation. An increase in stress is a consistent finding associated with using video for self confrontation. Many researchers suggest that some proactive steps be taken to reduce stress in activities requiring self-confrontation.

Fuller and Manning (1973) also found that self-confrontation alone does not increase self esteem. Other activities such as positive feedback and emphasizing growth overtime support the teacher in this process. In addition, the process of creating a portfolios can encourage change through reflection and self evaluation (Kieffer & Faust, 1994).

Another important issue in effective computer in-service is to focus on tool use by the teacher (Keirns, 1992; Bitter & Yohe, 1989; OTA, 1988) instead of knowledge about computers and the history of educational technology. The magnitude and complexity of the number of tools addressed in this workshop can be overwhelming to novice computer users.

Data Sources: Each day of the workshop the participants made journal entries on the computer. In addition to these, there were specific writing assignment during the

[1] Funds for this work were provided by The UGA Initiative funded by the Coca Cola Foundation and the Georgia Professional Standards Commission

"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY
M Hale
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

S1036/144

BEST COPY AVAILABLE

workshop, such as a goal statement for the next year and a description of themselves as computer users. An anonymous evaluation was collected at the end of each week of the in-service. These writings along with transcripts of interviews and observational data during the school year provide the bulk of the qualitative data analyzed.

Methods: Data were narrowed and analyzed along with collection following a preliminary open coding procedure (Strauss, 1987; Glaser, 1978). This process helps in defining the categories that emerge from workshop evaluations, journal entries, participant interviews, and field notes.

A database tool, called FileMaker Pro, was used to sort data in a method similar to the index card method mentioned by Lincoln and Guba (1985). The format for this analysis was first developed by one researcher (Dr. Kieffer) and others within a funded research project through The Ohio State University in conjunction with Apple Computers Inc. (see Tierney, Kieffer, Stowell, Desai, Whalin, & Moss, 1993).

Setting/Participants: During the Winter and Spring of 1994, groups of teachers at two rural elementary schools and one urban elementary school learned Macintosh basics and Microsoft Works. A total of 59 teachers received this introduction at the two rural schools. At the other urban elementary school, a majority of the faculty attended a six week staff development course covering a variety of Macintosh software conducted by a teacher from the school. The groups at the rural elementary schools were invited to bring their own work related to their needs in their classroom. This preliminary work was to lay a foundation for the summer multimedia workshop. Nine teachers and five students teachers were selected for the summer workshop.

Workshop Model: The workshop was scheduled from 8:00 am to 12:00 noon on June 20 - 24 and July 11 - 15 during the summer of 1994. Between the two weeks, the teachers and student teachers used the computers at home to practice and extend activities. This exploration continued following the second workshop week as they kept the computers until the beginning of school. All were volunteers and were paid $50/day for the workshop. Each school had three participating teachers and each grade level (K-5) was represented by at least one teacher.

Our model integrates several components which alone would be insufficient but together make a powerful environment for teacher professional development with technology. These components are:

- access to a state of the art multimedia workstation,
- on going access to experts for support and training,
- groups of teachers from each participating site for collaboration,
- time to learn and become comfortable with computers in the summer,
- opportunities to share their success and discuss their problems,
- and freedom to select and direct their work with the computers on activities relevant to their classrooms.

The goals for the participants during the workshop were to begin learning multimedia tools on the Macintosh (i.e. scanners, digitizers, Adobe Premiere, Adobe PhotoShop, Fusion Recorder) and to increase their awareness of the issues related to portfolios.

Results: Overall, the participants were excited and motivated to work and learn about multimedia technology. In this paper, we will share five categories that have emerged from our initial data analysis: access to computers, access to experts, exploration/work choices, concerns/complications, and growth.

Access to computers: The predominate reason given for the value of the workshop was the continued access to high powered computer workstations. This belief that the workstation will be theirs through the summer and into the school year was more motivating than the $50/day. There was no mention of the money in the journals and the evaluations. One participant even said "If they (administrators) had made it clear that we would have these computers for our classrooms, many more teachers would have wanted to participate." The student teachers also valued the access to the computers, however they were disturbed that the access would be taken away when the school year began. One student wrote in her second week anonymous evaluation:

> the teachers still will have their computers "within reach" and can maintain an "intimate" relationship once Fall quarter begins, and the students cannot keep up that close of a relationship since the computers are located in a public area away from our home or place of work (which will prevent us from becoming as familiar with the materials).

Later, as part of other funding, the pre-service teachers received Powerbooks to use along with their student teaching. Once having access to a single computer, these workshop participants realized and hoped for continued and even increased access both at school and at home to these state-of-the-art machines.

Access to experts: We believe it is inevitable that teachers will run into difficulties with computers as they explore and use professional multimedia tools. Without the continued support, the anxiety and frustration experienced by teachers will cause them to reduce or stop using technology. As an example, a teacher was excited by the possibilities HyperCard presented to her. During the workshop she used the Quicktime tools to put movies into a stack. From her journal during the summer workshop, she writes:

> We ended the day with demonstrations from HyperCard. This was just perfect for me. I understood all of what he did including the correct way to put buttons on the background. I really enjoyed seeing the correct way to paste pictures and movies into HyperCard. I am so excited!!! I really feel like HyperCard is going to be the tool to help me produce the type and kind of portfolio that I have envisioned in my head. I can't wait until tomorrow's class.

Later in September, she has difficulty performing the same task she completed during the summer.

> I spent all last night on the computer. I put many movie clips onto the computer. I neglected to mention earlier all the trouble I had getting a video from the VCR into my HyperCard project. I went into Quick Time Tools and followed the directions for installation. I then tried to place my video into my project. Guess what!! It did not work. A still picture of the first frame did appear in BLACK AND WHITE. I was horrified. I had already spent tons of hours just getting the video to this point that I did not know what to do.

Teachers learning about technology may be able to perform a task in a workshop context, however, those learning about technology may not remember how to do many of the tasks later without support. Having peers and other experts to help them recall previous learning can keep the novice computer user moving ahead. This teacher called Ron and together they solved the problem. Many of the participants in the workshop believed that they had experts to answer questions about the software if they ran into trouble in their explorations. They viewed themselves as experts about their classroom and their need was for someone to answer technical questions about the computers.

Exploration/work choices: It was important to the participants to build their confidence with these new machines. They reported that the two week break between the first and second week of the workshop helped with confidence building by reducing the information overload and allowing time to digest the work of the first week before starting the second. This timing and the individual freedom to explore at their own pace worked together to develop and maintain confidence. However, the specific skills and knowledge from the workshop varied for each participant. A teacher wrote in her journal:

> I feel that we are learning an incredible amount and it will take some time to really integrate all this into my teaching, but it will come. I will have to pick and choose the things I use first. I am going to have to make a real effort to put my focus on a portfolio for myself. It is not the first thing I think of doing with this software. Projects with my class come to mind first. I'll just have to keep samples of those projects!

Computer learning took precedence over the development of teacher portfolios. This teacher began thinking about her own portfolio only after she had time to think about integrating computers into the classroom curriculum.

> I have worked through several portions of Photoshop....I continue to think of new things I can do with it for projects with my class, but I realize I also need to think in terms of a portfolio about myself as a teacher which is a harder task. I'm not used to documenting good things I do.

We believe work needs to be done to help teachers value creating professional portfolios. The teachers participating in this workshop are only beginning to see the relationship between their own learning and their students' learning.

Concerns/complications: The teachers in the workshop expressed concerns about time to explore and use technology and told of complications with operating the computer. Time, in short supply, was an issue with all the teachers. They valued their time preparing to teach students, and to allow anything to impact on that time must be highly valued.

> I decided today that I was going to designate only one day a week to do computer work. I found I was spending way too many hours on the computer and getting extremely stressed out. This way this project is feasible. If I can't get it done in that amount of time (or a little More) then I need to change my focus. I am having a wonderful year and I don't want too much computer stress to ruin it.

Teachers continually had difficulties getting the computer to work as they wanted. They had problems with software installations, system crashes, trashing work by accident, scanning work, and navigating HyperCard. One teacher wrote:

> I am soooooooooooooo frustrated. I am still having great difficulty in linking my cards to a specific menu. I spent last Friday night trying to link all of this stuff and was very unsuccessful. I did correctly link the reading, writing, math, and science/social studies cards to a specific child's menu . I then proceed to do the same thing to the next child's menu but it doesn't work.

This teacher and many other participants solved problems by consulting varied resources including: university faculty, friends, technical manuals, and technology vendors. Collaborative support that help maintain teachers' growth over time was important to solve these complications with using technology.

Growth: The teachers moved from getting comfortable with the computers in the summer to looking for ways to integrate technology into their classroom as the school year began. They gained confidence with the computer and began to share their knowledge as experts with others.

> Work with computers has been going along well. It is amazing how confident I feel in working on my computer within the limits of what I have learned. I try out new software much more easily because of our experience with the class this summer. I still have many moments when I cuss and fuss at the computer. I guess we all have those. It is natural to run into problems, but I have such an advantage over my two nearest teaching neighbors (in pre-K and K) who were given new computers this year with absolutely no training and minimal software to use. I have been able to help them install the school's software (which isn't MUCH) and have been able to show them things I can do and work on projects together. It has been really fun to teach my teaching assistant about the computer- she is enjoying the whole process much more than I ever thought possible.

And later in an interview, this teacher connected computer use with her professional life as a teacher.

> I feel a lot more confident about the technology. I have more of a tendency to think immediately of going to do it on the computer instead of doing it the old way, handwriting and redoing. I've been much more willing to try new things on the computer than some of the other teachers who did not take this class. As far as change personally, just wanting to try new things, and think of new ways, new projects I can do that are new things I can do within the classroom. It's given me a little bit different way of looking at some of the classroom tasks that we do on an everyday basis and thinking why have we not had this before. ... I think it's more in the matter of just kind of making the technology a part of what I do and making it work for me in a way that I hadn't really considered doing before.

We believe that it takes years for teachers to integrate technology into their professional lives. Our workshop model provides some the resources necessary to enhance teachers' growth as competent computer users.

Educational Importance: Many new possibilities exist for teacher portfolio assessment using new multimedia technologies. The merging of high quality pictures, video, and

sound makes the creation of rich portfolios of the act of teaching possible. This workshop was our first step for testing the feasibility of multimedia for portfolio development for pre-service and in-service teacher professional development. The knowledge gained in conducting this workshop will be used to document teacher growth, to enhance self-reflection, and to facilitate communication about teaching between the UGA's College of Education faculty, early childhood pre-service teachers, and local practicing teachers.

Bitter, G. & Yohe, R. (1989). Preparing teachers for the information age. Educational Technology (4), 22-25.

Fuller, Frances F., & Manning, Brad A., (1973). Self-confrontation reviewed: A conceptualization for video playback in teacher education. Review of Educational Research Vol. 43(4) 469-528.

Glaser, B. (1978). Theoretical Sensitivity. Mill Valley, CA: Sociology Press.

Keirns, J. (1992). *Does computer coursework transfer into teaching practice*. Journal of Computing in Teacher Education, 8(4), 29-34.

Kieffer, R. D. & Faust, M. A. (1994). Portfolio process and teacher change: Elementary, middle, and secondary teachers reflect upon their initial experiences with portfolio evaluation. In C. K. Keizer, & D. J. Leu (Eds). Multidimensional aspect of literacy research, theory, and practice. Forty third Yearbook of the National Reading Conference (pp. 82-88). Chicago: National Reading Conference.

Lincoln, V. & Guba, E. (1985). Naturalistic Inquiry. Beverly Hills: Sage.

Strauss, A. (1987). Qualitative Analysis For Social Scientists. New York: Cambridge University Press.

Tierney, R. J., Kieffer, R. D., Stowell, L., Desai, L. E., Whalin, K., & Moss, A. G. (1992). Computer Acquisition: A Longitudinal Study of the Influence of High Computer Access on Students' Thinking, Learning, and Interaction. Cupertino, CA: Apple Computer Inc.